In the Specification

Please replace the paragraph spanning pages 13 and 14 with the following:

In reciprocal space, this translates into the convolution of the Fourier transformed illumination function F(Bel(x)) with the Fourier transformed object function F(Obj((x)) and subsequent multiplication with the light-optical transfer function OTF(k) (F refers to the Fourier formation here and in the following, the coordinates in reciprocal space are indicated with k). Analogously to equation (1), the following results:

$$F(I_m(x)) = OTF(k) \cdot (F9(Bel(x)) \otimes F(Obj(x))).$$

Please replace the paragraph spanning pages 16 and 17 with the following:

According to equation (4), in the non-linear case, terms of higher order in $b_1(x)$ also provide contributions to I_{em}, such as the terms with the factors c_5 and/or c_6. The Fourier transformations of these terms are also contained in $F(I_{em}(Obj(x), b(x)))$. With $b_1(x) = Bel(x)$, one also obtains the term $c_5 \cdot (F(Bel(x)) \otimes F(Bel(x))) \otimes F(Obj(x))$ in the expression 2. With a certain component in the image, it is now possible to measure spatial frequencies of the object which were previously not accessible, because they could not yet be displaced, by convolution with the spatial frequency limited function F(Bel(x)), into the range detectable by means of OTF. The extent of the region of support from F(Bel(x)) $\otimes$ F(Bel(x)) can now, however, be correspondingly larger, with higher spatial frequencies thereby also displacing into the range corresponding to the OFT and thus being measurable in the image. Further higher orders work out correspondingly in further convolutions with the Fourier transformations of $b_i(x)$, so that even higher object spatial frequencies are detectable. In principle, it is possible to detect spatial frequencies of the object of any desired height and thereby to increase the resolution as much as desired, if corresponding coefficients are present in the series expansion

according to equation (4). However, in practice, the resolution achievable during reconstruction is often restricted by the signal-noise ratio attainable at the high object spatial frequencies.

Please replace the paragraph spanning pages 20 and 21 with the following:

The intensity distribution of the excitation light is approximately described in this example by a sine function displaced into the positive range. In the ideal case, point-shaped maxima at $k=0$, $k=+k_b$, and $k=[[+]]-k_b$ result as Fourier transformations (cf. Fig. 1). These maxima have, depending on the degree of modulation, a specific energy and a specific phase angle in the complex plane, which depends on the position and/or the displacement (location) of the pattern of the excitation light. Through the Influence of the non-linear dependence of the fluorescence emissions on the excitation intensity (saturation of the fluorescence), the Pattern shown in Fig. 2 with lower and higher frequency components in reciprocal space results, for example, as the excitability pattern for a specific fluorophore types.